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IN THE ANGLO-EGYPTIAN SUDAN (Bulletin No. 1), GIRLS OF THE MESSERIA TRIBE WEAR JEWELS THAT JINGLE-JANGLE-JINGLE

Bulletin No. 1, November 12, 1951

# Anglo-Egyptian Sudan Involved in Suez Crisis

INVOLVED in the crisis between Egypt and Great Britain are the Suez Canal and the Anglo-Egyptian Sudan, one of Africa's largest countries. The Egyptian parliament recently proclaimed King Farouk "King of Egypt and the Sudan," thus in effect laying sole claim to nearly a million square miles of territory (map, next page) with some 8,000,000 people.

The British stand is that the Sudanese people themselves should vote on any action that affects their future status. Since 1899 the condominium, or partnership, of England and Egypt in administering the Sudan has been based on treaty and accepted internationally.

## Differing Groups Live in Peace

Many varied peoples make up the Sudanese. They are Arabs; descendants of the ancient Egyptians; Nilotes; and many Negroid groups. Side by side with nomadic Arab tribes live such primitive folk as the Nuba villagers (illustration, inside cover) whose daughters enrich their fathers with a "bride-price" when they marry, and whose sons, in enthusiastic manhood rites, fight each other with heavy sticks and skull-cracking bronze bracelets.

These groups live in peace, largely under their own laws, paternally watched over by a handful of British Foreign Office administrators. Tribal structure is maintained. Courts, when necessary, are held out of doors by the political officers, often in conjunction with two native magistrates.

Khartoum, the capital, and Omdurman, at the junction of the Blue Nile and White Nile, are the only cities. Thus Sudan's 8,000,000 people roam a giant area one-third the size of the United States. Stretching westward from the Red Sea deep into the heart of Africa, the Sudan lies athwart the continent's overland routes as well as alongside the Suez Canal-Red Sea lane.

British connection with the Sudan began after the opening of the Suez Canal in 1869. In the early 1870's the Egyptian khedive, who had gained nominal control over the wild country to the south, appointed as its governor Sir Samuel Baker, British explorer and big-game hunter.

## Kitchener and Churchill Fought Dervishes

Successor to Sir Samuel was General Charles ("Chinese") Gordon, who won his nickname by earlier distinguished service in China. Eventually, in 1885, Gordon was to lose his life in the Sudan at the hands of dervish fanatics in the politico-religious Mahdi uprising.

Still another of Britain's famous sons to play a dramatic role in the Sudan story was Lord Kitchener, who led the British-Egyptian forces in the final Sudan campaigns which ushered in joint British-Egyptian rule in 1899. And one young officer who fought in the last decisive battle, at Omdurman in 1898, was Winston Churchill.

The Messeria (illustration, cover), Amarar, and other peacefully

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GEORGE RODGER—MAGNUM

**RASHAD IS DISTRICT HEADQUARTERS FOR BRITISH ADMINISTRATION IN THE NUBA HILLS OF THE ANGLO-EGYPTIAN SUDAN**

Three hundred thousand Nuba tribesmen live in the mountains of eastern Kordofan, a province of the large African land (Bulletin No. 1) now claimed solely by Egypt. The cone-shaped buildings are native style. Four or five of them placed in a close circle form the usual Nuba home.

# Beachy Head Gives up Its Post as Sentinel

BEACHY HEAD, the majestic chalk promontory overlooking the English Channel from England's southern coast, has lost its professional status as a sentinel.

The precipitous headland, from which watchers have gazed toward the French coast through countless centuries, is reported to have been given up as a modern naval and coast guard station. The observation chores will be carried on from neighboring points to the east and west.

The stretch of Sussex coast 50 miles southeast of London commanded by Beachy Head has many landmarks of the martial events that helped shape England's story.

## William's Forces Landed at Leisure

At the little bay of Pevensey, half a dozen miles to the east of the towering headland, William, Duke of Normandy, landed with his army in 1066, while King Harold was defending his throne in the north.

The Normans leisurely unloaded their horses, coats of mail, longbows, and lances. They even brought along carpenters and materials to build the wooden structures that were soon to rise on the Pevensey beach and at the near-by port of Hastings.

The invaders had time to sack the countryside before Harold, after routing his enemies in the north, rushed with hastily augmented forces to meet the Norman foe at the English Channel. The famous Battle of Hastings followed, about 15 miles northeast of Beachy Head. It was this event which won William of Normandy his title, "the Conqueror," and ushered in the era of Norman rule and culture.

Before the Normans came, England had been overrun by Romans, Saxons, Danes, and Norsemen, among others. In 55 and 54 B. C. Julius Caesar crossed the Channel where it narrows near the cliffs of Dover—some 50 miles upcoast from the heights of Beachy Head—and raided the region.

William's conquest, however, was the last successful invasion of "the tight little isle." Lookouts on the Head were to see no more enemy landings on their shores, although excitement was supplied from time to time by privateers and smugglers, and tragic shipwrecks sometimes took place on the dangerous rocks below.

## In Path of German Bombers

Off the promontory's sheer and chalk-brittle precipice, too, the historic Battle of Beachy Head was fought in 1690. In this struggle between the French and allied English and Netherlands fleets, the English admiral, the Earl of Torrington, was defeated and forced to retreat to the Thames. He was sent to the Tower of London for his action, and though eventually exonerated, was stripped of his commission by the king, William III.

During World War II, the strip of England's "invasion coast" which included Beachy Head was in the path first of German bombing planes and later, toward the end of the war, of the flying missiles called "buzz

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roaming Arab tribes of the Sudan were, a few generations ago, the "whirling dervishes" and "first-class fightin' men" (Fuzzy-Wuzzies) who threw the unbelievers out of their country and fought so hard to keep them out. During World War II, Italian forces temporarily occupied parts of the eastern Sudan and bombed Khartoum. Sudanese civilians and troops remained loyal.

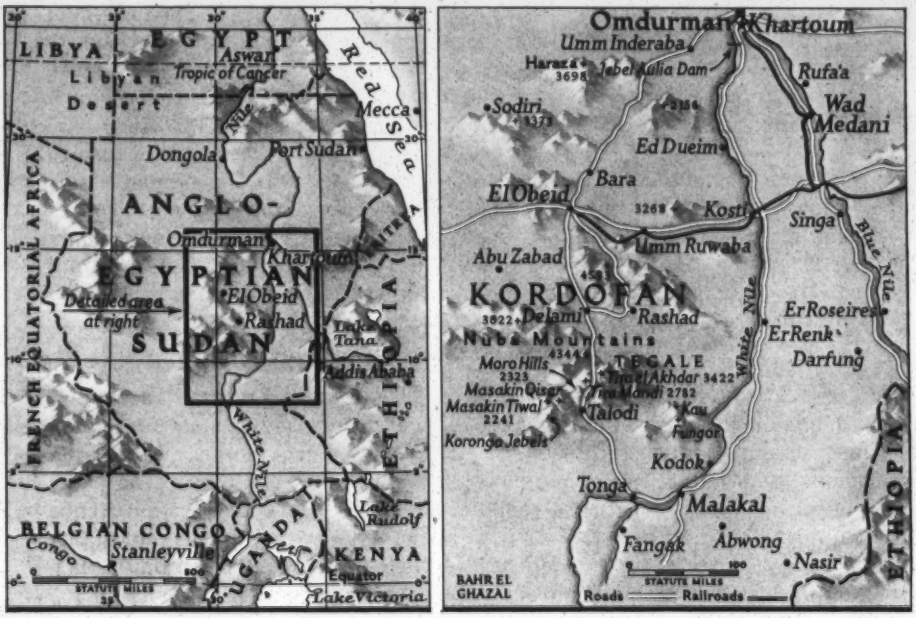
For the Sudanese people, as for the Egyptians, the River Nile is the center of life and prosperity. From the forested, animal-haunted uplands in the south the river flows the entire length of the country, bringing a ribbon of fertility to desert and scrublands.

Nomadic or seminomadic, the people are largely dependent on subsistence crops and livestock. Cotton has become an important money crop. The Sudan is the world's largest source of gum arabic, a product of the acacia plant. Some gold, ivory, and salt are also produced.

NOTE: Egypt and the Anglo-Egyptian Sudan are shown on the National Geographic Society's map of Africa. Write the Society's headquarters, Washington 6, D. C., for a price list of maps.

For further information, see "With the Nuba Hillmen of Kordofan," in the *National Geographic Magazine* for February, 1951; "Three-Wheeling Through Africa," January, 1934; and "Two Fighting Tribes of the Sudan," October, 1929. *(Back issues of the Magazine may be obtained from the Society's headquarters at 60¢ a copy, 1946 to date; $1.00 from 1930 through 1945; and $2.00 from 1912 through 1929. Earlier issues, when available, at varied prices.)*

See also, in the GEOGRAPHIC SCHOOL BULLETINS, May 6, 1946, "Fate of the Anglo-Egyptian Sudan Depends on Treaty Revision."




DRAWN BY HARRY S. OLIVER AND IRVIN E. ALLEMAN

**THE SUDAN LIES BETWEEN THE DESERTS OF THE NORTH AND THE JUNGLES OF THE SOUTH**

**Climate is hot. Winters are dry and summers wet. Grasses grow three feet and more in height. Trees are thorny and flat-topped. North of Omdurman desert conditions prevail. The Anglo-Egyptian Sudan is four times as large as Texas. Map at right shows central part of country.**

Bulletin No. 3, November 12, 1951

# Non-Uniform Gauge Plagues Foreign Railroads

THE tedious business of transhipping over railroad lines of varying track gauge is virtually unknown in America north of the Rio Grande. It nevertheless continues to complicate rail transportation at many places on six continents. Because of this, an old idea is being tried anew on the Pyrenees-walled frontier between France and Spain.

There, a new-type railroad-car axle which is adjustable to variations in track width has recently come into use. Successful in its first tests, this French invention makes possible the transfer of cars from French tracks of standard gauge (four feet, eight and a half inches) to the broad-gauge Spanish tracks (five feet, six inches), and vice versa. Expensive and time-consuming unloading and reloading were eliminated in the tests.

## Standard Gauge Based on Wagon Width

Standard gauge has earned the right to be so called, since it now is all but universal in the United States and Canada, Great Britain, France, Germany, and Italy. It is found on every continent except rail-less Antarctica. It prevails in Soviet-satellite countries of eastern Europe, where freight moving toward Moscow must be transhipped on Russian rails of five-foot gauge.

The odd width of the standard gauge came about, records show, because European rail wagons of the 17th century had wheels set five feet apart. They rolled on tracks that had a flange, or turned-up rim at the edge. For faster speeds, this flange was transferred to the wheel and this produced the track gauge of four feet, eight and a half inches.

Railroads of today employ a score of different gauges ranging from less than two feet up to five and a half feet, as in Spain. Gauges of three to three and a half feet prevail in many mountainous regions where lighter trains for steeper-than-average grades are desirable.

Spain is a notable exception to this rule, its broad-gauge rails winding through regions where two miles of roadbed are needed on the average to progress a straight-line mile. The Spaniards, with an eye on Europe's history, purposely chose a gauge different from that of their neighbor France, so that any invader's progress would be impeded rather than expedited.

## England Had Seven-foot Road

Chile, stretching for 2,600 miles along the Pacific slope of the Andes range, has trackage of no less than six widths, including the two-foot and five-and-a-half-foot extremes. Argentina's lines are mostly of five-and-a-half-foot gauge, while India, Ceylon, Portugal, and Ireland are among countries with rails laid at or near this maximum present-day width. In the last century, one could travel from New York to St. Louis over rails of six-foot spread, and tracks of England's old Great Western Railway were seven feet apart.

Australia has some 27,000 miles of government-owned rail lines, their use complicated by gauges varying with the states. New South

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bombs." This rain of death and destruction gave the coast the nickname "Hell's Corner." The seaside town of Eastbourne, in the shadow of Beachy Head, was considerably battered by the attacks.

Since the end of the war, vacationists and tourists, attracted by the sun-flooded beaches and the bracing air, have again flocked to the Beachy Head area. For visitors to the neighborhood, the promontory itself is a popular goal of walks and drives. The name Beachy Head comes from the French *beau chef*, meaning "beautiful head."

NOTE: Beachy Head may be located on the Society's map of The British Isles.

For additional information on the region, see "Preservation of England's Historic and Scenic Treasures," in the *National Geographic Magazine* for April, 1945; "Rural Britain Carries On," October, 1941; "Britain Just Before the Storm" and "Charm Spots Along England's Harassed Coast" (16 photographs), August, 1940; and "The Penn Country in Sussex," July, 1935; see also, in the GEOGRAPHIC SCHOOL BULLETINS, February 19, 1951, "Bleak House, Dickens Landmark, up for Sale"; and "Developments Affect Two English Towns," January 19, 1948.

W. ROBERT MOORE

**BEACHY HEAD, WHERE ENGLAND'S FAMOUS CHALK CLIFFS REACH THEIR HIGHEST POINT, RISES IN A PERPENDICULAR WHITE WALL MORE THAN 500 FEET FROM THE WATERS OF THE ENGLISH CHANNEL**

TEACHERS! Do you leaf aimlessly through your *National Geographic Magazines*, looking for that article on Greece, those color pictures of Guatemalan costumes? Save time. Order the Cumulative Index, 1899-1950 inclusive. $2.50.

Bulletin No. 4, November 12, 1951

# Penny Famine Hits Childhood's Favorite Coin

AGAINST all storybook advice, the slogan now is: "Don't save your pennies; keep them in circulation." Certain companies have offered $1.00 per 90 pennies or $102.50 for $100 worth to keep the coins moving.

There is a copper shortage (illustration, next page). The Bureau of the Mint is hard pressed to keep up with the current booming demand for pennies. Uncle Sam is asking hoarders to get out their cookie-jar and piggy-bank collections. Not that a spending spree is in order. It is thriftier, says the Treasury Department, to save in larger denominations and invest in interest-paying defense bonds.

## 18 Billion Pennies Not Enough

By legislation passed in 1864, United States pennies must contain 95 per cent copper, plus a five-per-cent mixture of tin and zinc.

At present it is estimated there are 18,367,792,533 pennies outstanding, which by no means indicates an equivalent number in actual circulation. Many are held by collectors and savers, and large numbers are concentrated in vending-machine and other big-scale operations.

Since the ratio of tin and zinc is not specified, the penny's much-needed tin content was reduced to a minimum soon after the United States entered World War II. An emergency issue of zinc-coated steel cents was struck in 1943, their composition determined by the necessity for conserving precious copper and other strategic metals.

So unpopular were the gray coins, however, that this minting was discontinued after that year, and many have been retired when turned in. Mutilated against further use as money, they have gone into scrap to make such things as rails, wire, and structural steel. Instead of steel, the mint was authorized to use expended brass shell cases as the raw material for one-cent pieces.

The first coin authorized by the United States Congress was a cent bearing the date 1787. A big pure-copper piece, it is known as the Fugio, or Franklin cent because Benjamin Franklin is believed to have inspired its motto, "Mind your business."

## Small Pennies First Minted in 1857

Following the establishment of the official United States Mint in 1792, came the all-copper "Liberty" cents, turned out with numerous die variations. It bears the head of a woman and a liberty cap on the front; a chain or wreath on the reverse. These, too, were big coins.

It was not until 1857 that the now familiar small pennies were minted. The first ones were of flying eagle design and were retained only until 1858. Indian head cents were issued from 1859 to 1909.

Before Congress established the present content of cents, flying eagle and Indian head cents were made of 88 per cent copper and 12 per cent nickel. The resulting "white penny," paled by the nickel ingredient, has been of special interest to collectors.

The treasury's latest and current cent, the Lincoln head, was first struck in 1909, the centenary of Lincoln's birth. Pennies of that year,

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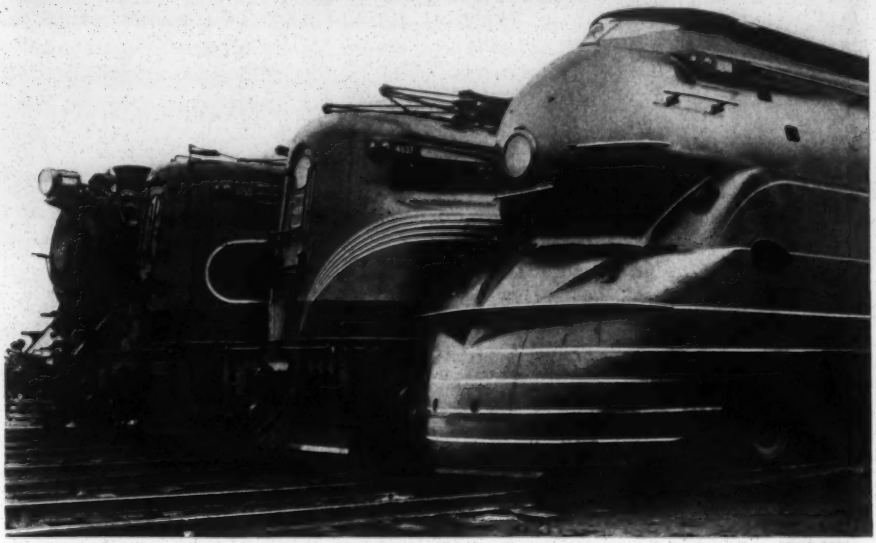
Wales tracks are standard; Victoria's and South Australia's are broad; Queensland's and Western Australia's are narrow. All future rail laying by the government, however, will stick to standard gauge.

At the railroad station at Port Pirie, South Australia, an intricate track and switching system handles trains on three separate widths of track. The same involved situation holds for stations at Hendaye on the French-Spanish border; at Montreux, Switzerland; at Vaxjo, Sweden; and, doubtless, at other points.

Life in the United States, in the meanwhile, is comparatively simple for the freight-forwarding railroad man. Of 225,000 miles of railroad, less than 1,000 miles is not standard gauge. Most of the off-standard track runs through steeply graded Rocky Mountains country, and measures one yard between rails.

NOTE: For additional information, see "Freedom Train Tours America," in the *National Geographic Magazine* for October, 1949; "Dixie Spins the Wheel of Industry," March, 1949; and "Trains of Today—and Tomorrow," November, 1936.



WIDE WORLD

**LOCOMOTIVES HAVE A NEW LOOK. THE TRADITIONAL STEAM MODEL (left) IS OUTMODED BY ELECTRIC ENGINES AND BY STREAMLINED STEAM-DRIVEN TYPES (right)**

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Bulletin No. 5, November 12, 1951

# Azores Are Aerial Gateway to Europe, Africa

IN the Azores, Portugal's Atlantic island province, aerial activity has reached a new peak. With the signing of a new defense agreement between the United States and Portugal, the Azores have become a global crossroads to rival Hawaii, Singapore, or Gibraltar.

At Lagens Field, the United States air base on Terceira, huge transport planes light and take off on an average of more than ten a day. Up and down its runways—one more than two miles long—swoop planes transporting ambassadors and generals, civilians and "lower brass," on missions between the United States and its military and civil outposts abroad. The Azores have been called an "aerial gateway to Europe and Africa."

## Name Means Hawk

For nearly five centuries, these volcanic isles have served as a strategic way station in the Atlantic. Rising steeply out of the ocean in an area 800 to 1,200 miles west of Portugal, the nine islands are among the few surface-piercing peaks of the submerged Mid-Atlantic Ridge, the world's longest mountain range.

Columbus used the Island of Santa Maria—the easternmost—as a steppingstone on the last lap of his return voyage from America in 1493. In the days of the galleon, these "Isles of the Hawks" (from the Portuguese word *açores*) were ports of refuge for Spanish and Portuguese treasure armadas. Today, the old fortifications built to keep out rampaging privateers lie in picturesque ruins while modern airstrips throb with action. There is regular steamship service between New York and the islands, as well as commercial airline flights. Ponta Delgada, thriving port on São Miguel, is the largest city of the Azores, with a population of some 22,000. Second in importance is Angra do Heroismo (illustration, next page), nearest town to Lagens Field on Terceira. Horta, on Fayal, has one of the largest cable stations in the world.

The new agreement defining facilities in the Azores to be used by the United States had a precedent in World War I when the Navy maintained a base in the islands. During World War II, hundreds of American airmen were stationed at Lagens Field. Thousands passed through to and from air battles over Europe. Terceira is about 2,400 miles from New York.

## Linked With Legend

The Azores first became a way station for flyers in 1919 when the Navy plane NC-4 hopped there from Newfoundland on the first transatlantic flight. Twenty years later the *Yankee Clipper* made them a port of call on regular flights between New York and Marseille, France.

The islands are sometimes poetically linked to the fabulous "lost Atlantis"—the legendary continent that Arabian geographers discovered only in medieval writings.

Pink, blue, and white stucco houses with red tile roofs give the islands a Mediterranean appearance. The famous "singing carts," named

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bearing the initial S (for the San Francisco mint) and V.D.B. (the initials of the designer, Victor D. Brenner) have the highest book value of the issue because of their relative scarcity. This scarcity came about when the designer's initials were removed soon after minting was started.

Far more cents are struck than other coins. In 1950, more than 726,000,000 were manufactured in United States mints at Philadelphia, San Francisco, and Denver. The figure was more than three times the total of nickels, dimes, quarters, and fifty-cent pieces.

The supply of the coppers has fluctuated wildly through the years. Among factors affecting demand are sales taxes and parking meters, inflationary pressures and price controls which may bring about sudden mass changes in fractional costs.

NOTE: For additional information, see "Pieces of Silver," in the *National Geographic Magazine* for September, 1933 (out of print; refer to your library); and "The Geography of Money," December, 1927.

See also, in the GEOGRAPHIC SCHOOL BULLETINS, May 8, 1950, "Proposed Coins Recall U. S. Mint History."

C. J. STRAKAL

**THIS COPPER SMELTER AT ANACONDA, MONTANA, IS ONE OF THE WORLD'S LARGEST**

**The ore taken from the world's richest copper mine at near-by Butte is here melted down. The United States is the leading copper-producing country, followed by Chile and Canada.**


## "Everyday Life in Ancient Times"

*A new book compiled by the National Geographic Society brings to life the peoples of the ancient lands where Western civilization originated—Mesopotamia, Egypt, Greece, and Rome. Illustrated with 120 full-color paintings by H. M. Herget and written by four noted authorities, the 356-page volume is available to schools at $5.00 a copy postpaid in the United States and its possessions, and $5.25 abroad.*

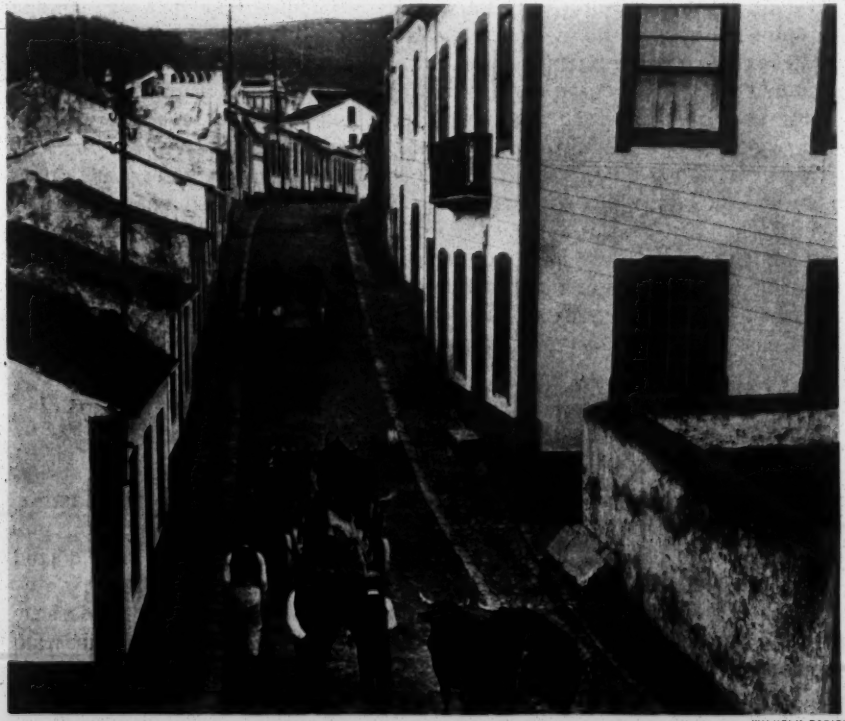
for their creaking wooden wheels, plod along streets paved in tile or cobblestones. Hydrangeas, azaleas, and camellias border the roads.

Stark volcanic peaks, the highest more than 7,000 feet, rise above vineyards and intensively cultivated fields of pineapples, corn, wheat, and tobacco. The climate is nearly ideal—the temperature ranging from a low of 45 degrees to a high of 86. Fruits, grain, dairy products, cattle, canned fish, and whale oil are the chief exports. Tea is grown in quantities sufficient to supply the islanders and to ship to mainland Portugal. Ever since their navigators discovered the sea route to the Orient, nearly 500 years ago, the Portuguese have been great tea drinkers.

The islands' less than 1,000 square miles support nearly 500,000 people. Most of them are of Portuguese origin, and there are numerous descendants of English, Scottish, and Irish immigrants. Many Portuguese who settled on Cape Cod, in New Bedford, and elsewhere in the United States, came from the Azores.

NOTE: The Azores may be located on the Society's map of the Atlantic Ocean.

For additional information, see "New Discoveries on the Mid-Atlantic Ridge," in the *National Geographic Magazine* for November, 1949; "American Airman in the Azores" (10 color photographs), February, 1946; and "European Outpost: The Azores," January, 1935; see also, in the GEOGRAPHIC SCHOOL BULLETINS, March 8, 1948, "Volcanic Azores Are Sea and Air Crossroads."



WILHELM TOBIEN

**THROUGH ANGRA'S NARROW SIDE STREETS, OXEN PULL THE SINGING CARTS HOME FROM MARKET**

**The so-called singing, a chorus of wails from ungreased wooden axles, is louder when the heavily loaded carts are on the way to market. Whitewashed lava-rock houses are typical Azores homes.**